IN THE CLAIMS:

Claim 40 was previously canceled. Claims 17, 22, 25, 26, 32, 33, and withdrawn claims 35 through 41 are to be canceled herein. Claims 1, 13-16, 18-20, 27-30, and 34 have been amended herein. All of the pending claims 1 through 16, 18 through 21, 23, 24, 27 through 31, and 34 are presented below. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as amended.

Listing of the Claims:

1. (Currently amended) A method for quantifying an initial ratio of the amounts of at least two nucleic acids of interest in a sample by means of a multiplex nucleic acid amplification reaction, said method comprising:

- amplifying the nucleic acids of interest in the amplification reaction;

- measuring the amount of at least two nucleic acids of interest at at least two different time points in the reaction;

- determining, from at least two of the measurements, the amplification ~~rate~~ rates of the at least two nucleic acids of interest;

- determining a ratio of the amplification rates of the at least two nucleic acids of interest;

- comparing the ~~rates~~ ratio with a reference; and

- determining, from the comparison, the initial ratio of the amounts of the at least two nucleic acids of interest in the sample.

2. (Original) The method according to claim 1, wherein at least one variable factor in the nucleic acid amplification reaction is adjusted in order to allow detectable levels of all nucleic acids of interest to be reached before an amplification and/or detection limit of one or more of the nucleic acids of interest is reached.

3. (Original) The method according to claim 2, wherein the variable factor affects an amplification efficiency of one nucleic acid of interest to a different extent as compared to another nucleic acid of interest.

4. (Previously presented) The method according to claim 2, wherein the variable factor comprises the concentration of at least one primer.

5. (Previously presented) The method according to claim 2, wherein the concentration of at least one primer is significantly different from the concentration of at least one other primer.

6. (Previously presented) The method according to claim 2, wherein the variable factor comprises the concentration of at least one set of primers capable of annealing to a nucleic acid of interest.

7. (Previously presented) The method according to claim 2, wherein the concentration of at least one set of primers capable of annealing to a nucleic acid of interest is significantly different from the concentration of at least one other set of primers capable of annealing to a nucleic acid of interest.

8. (Previously presented) The method according to claim 2, wherein the variable factor comprises the concentration of salt.

9. (Previously presented) The method according to claim 2, wherein the nucleic acids of interest comprise independent nucleic acids of interest.

10. (Previously presented) The method according claim 2, wherein at least one of the nucleic acids of interest comprises RNA.

11. (Previously presented) The method according to claim 2, wherein at least one of the nucleic acids of interest comprises DNA.

12. (Previously presented) The method according to claim 2, wherein the multiplex amplification reaction comprises NASBA.

13. (Currently amended) A method for determining functioning of a cellular organism, said method comprising:

determining ~~the~~ a ratio of the amount of ~~a first~~ mitochondrial nucleic acid in relation to the amount of ~~a second~~ chromosomal nucleic acid in a sample obtained from the cellular organism, and

determining whether the ratio is indicative of functioning of the cellular organism,

wherein the ratio is quantified with the method according to claim 1.

14. (Currently amended) The method according to claim 1, wherein at least one of the nucleic acids of interest comprises ~~an endosymbiont cellular organelle~~ mitochondrial nucleic acid.

15. (Currently amended) The method according to claim 14 wherein the ratio comprises the ratio of the amount of ~~an endosymbiont cellular organelle~~ mitochondrial nucleic acid in relation to the amount of a ~~nuclear~~ chromosomal nucleic acid in the sample.

16. (Currently amended) A method for determining the staging of [[a]] an HIV-related disease in a patient, said method comprising:

determining the ratio of the amount of ~~a first~~ mitochondrial nucleic acid in a sample obtained from ~~an organism~~ a patient suffering from, or at risk of suffering from, the HIV-related disease in relation to the amount of ~~a second~~ chromosomal nucleic acid, and

determining whether the ratio is indicative of further development of the HIV-related disease or recovery of the patient,

wherein the ratio is quantified with the method according to claim 1.

17. (Canceled).

18. (Currently amended) The method according to claim 16 wherein the ~~first cellular organelle~~ mitochondrial nucleic acid and the ~~second~~ chromosomal nucleic acid comprise DNA and RNA.

19. (Currently amended) A method for determining therapeutic activity and/or possible side-effects of a compound, said method comprising:

determining the ratio of the amount of ~~a first~~ mitochondrial nucleic acid in a sample obtained from an organism in relation to the amount of ~~a second~~ chromosomal nucleic acid with the method according to claim 1, and

determining whether the ratio is indicative of therapeutic activity and/or possible side-effects.

20. (Currently amended) The method according to claim 19, wherein the therapeutic activity comprises a therapeutic activity against an HIV-related disease~~, a tumor-related disease, or both an HIV-related disease and a tumor-related disease~~.

21. (Original) The method according to claim 19, wherein the compound comprises a nucleoside and/or nucleotide analogue.

22. (Canceled).

23. (Previously presented) The method according to claim 21, wherein the nucleoside and/or nucleotide analogue comprises fludarabine, mercaptopurine, tioguanine, cytarabine, fluorouracil, and/or gemcytabine.

24. (Previously presented) The method according to claim 19, wherein the compound comprises AZT, ddI, ddC, d4T, 3TC and/or tenofovir, and/or abacavir.

25. (Canceled).

26. (Canceled).

27. (Currently amended) A method for determining toxic activity of a candidate compound for causing malfunctioning of a cellular organism, said method comprising:

determining a ratio of the amount of ~~a first~~ mitochondrial nucleic acid in a sample obtained from an organism in relation to an amount of ~~a second~~ chromosomal nucleic acid with a method according to claim 1, and

determining whether the ratio is indicative of toxic activity of the candidate compound.

28. (Currently amended) The method according to claim 19 wherein the organism ~~or an essentially related organism~~ has been provided with the compound.

29. (Currently amended) A method for determining selective activity of a candidate compound against a first organism, said method comprising:

determining therapeutic activity and/or possible side-effects of the candidate compound with the method according to claim 19, wherein therapeutic activity or side-effects are indicative of selective activity of the candidate compound against the first organism.

30. (Currently amended) The method according to claim 29 further comprising providing ~~an essentially unrelated~~ a second organism with the compound.

31. (Original) The method according to claim 30 wherein the first organism comprises a pathogen and the second organisms comprises a host for the pathogen.

32. (Canceled).

33. (Canceled).

34. (Currently amended) The method according to claim 13, wherein the ~~first~~ mitochondrial nucleic acid and/or the ~~second~~ chromosomal nucleic acid is obtained from a peripheral blood mononuclear cell and/or a fibroblast.

35. through 41 (Canceled).